

IN THE CLAIMS

Amendments to the claims:

Please amend the claims as follows:

1. (Currently Amended) A method for determining homogenization and/or reaction completion, comprising the steps of:

(1) mixing a test liquid and a reagent liquid to obtain a liquid mixture;

(2) measuring an optical property of said liquid mixture after the mixing continuously or a plurality of times discretely;

(3) obtaining a relation between the measured value of the optical property obtained and the elapsed period of time since the start of the measurement after the mixing; and

(4) determining, on the basis of said relation, whether said test liquid and said reagent liquid have been substantially homogeneously mixed with each other and/or a reaction between said test liquid and said reagent liquid has been substantially completed,

wherein

said step (3) is a step of obtaining $(dS1/dt)/S1$ (wherein $S1$ is the measured value of the optical property obtained and T is the elapsed period of time since the start of the measurement after the mixing), and

said step (4) is a step of determining that said test liquid and said reagent liquid have been substantially homogeneously mixed with each other and/or the reaction between said test liquid and said reagent liquid has been substantially completed, when the $(dS1/dt)/S1$ has continuously been in a predetermined range $R2$ for a predetermined period of time $T2$ or longer.

2. (Cancelled).

3. (Cancelled).

4. (Original) The method for determining homogenization and/or reaction completion in accordance with claim 1, wherein a measurement is rendered invalid when homogenization and/or reaction completion has not been determined within a predetermined period of time T from the start of the measurement.

5. (Currently Amended) A method for determining homogenization and/or reaction completion, comprising the steps of:

- (1) mixing a test liquid and a reagent liquid to obtain a liquid mixture;
- (2) measuring an optical property of said test liquid and said liquid mixture continuously, or, measuring an optical property of said test liquid at least once and measuring an optical property of said liquid mixture after the mixing a plurality of times discretely;
- (3) obtaining a relation between the measured value of the optical property obtained and the elapsed period of time since the start of the measurement after the mixing; and
- (4) determining, on the basis of said relation, whether said test liquid and said reagent liquid have been substantially homogeneously mixed with each other and/or the reaction between said test liquid and said reagent liquid has been substantially completed,

wherein

said step (3) is a step of obtaining $(dS1/dt)/(S1-S0)$ (wherein $S0$ is the measured value of the optical property of said test liquid, $S1$ is the measured value of the optical property of said liquid mixture, and T is the elapsed period of time since the start of the measurement after the mixing), and

said step (4) is a step of determining that said test liquid and said reagent liquid have been substantially homogeneously mixed with each other and/or the reaction between said test liquid and said reagent liquid has been substantially completed, when the $(dS1/dt)/(S1-S0)$ has continuously been in a predetermined range $R3$ for a predetermined period of time $T3$ or longer.

6. (Cancelled).

7. (Original) The method for determining homogenization and/or reaction completion in accordance with claim 5, wherein a measurement is rendered invalid when homogenization and/or reaction completion has not been determined within a predetermined period of time T from the start of the measurement.

8. (Currently Amended) A method for measuring solution concentration, comprising the steps of:

- (1) mixing a test liquid and a reagent liquid to obtain a liquid mixture;
- (2) measuring an optical property of the liquid mixture after the mixing continuously or a plurality of times discretely;
- (3) obtaining a relation between the measured value of the optical property obtained and the elapsed period of time since the start of the measurement after the mixing;
- (4) determining, on the basis of said relation, whether said test liquid and said reagent liquid have been substantially homogeneously mixed with each other and/or a reaction between said test liquid and said reagent liquid has been substantially completed; and
- (5) determining the concentration of a specific component of said test liquid based on said measured value,

wherein

said step (3) is a step of obtaining $(dS1/dt)/S1$ (wherein $S1$ is the measured value of the optical property obtained and T is the elapsed period of time since the start of the measurement after the mixing), and

said step (4) is a step of determining that said test liquid and said reagent liquid have been substantially homogeneously mixed with each other and/or the reaction between said test liquid and said reagent liquid has been substantially completed, when the $(dS1/dt)/S1$ has continuously been in a predetermined range $R2$ for a predetermined period of time $T2$ or longer.

9. (Original) The method for measuring solution concentration in accordance with claim 8, further comprising the step of mixing another reagent liquid with said test liquid, after determining that the said test liquid and said reagent liquid have been homogeneously mixed and/or the reaction therebetween has been substantially completed.

10. (Original) The method for measuring solution concentration in accordance with claim 9, wherein another reagent liquid is mixed with said test liquid upon the lapse of a predetermined period of time $T4$ after determining that the said test liquid and said reagent liquid have been homogeneously mixed and/or the reaction therebetween has been substantially completed, and the optical property of said liquid mixture is measured prior to the lapse of the predetermined period of time $T4$.

11. (Original) The method for measuring solution concentration in accordance with claim 8, wherein a measurement is rendered invalid when homogenization and/or reaction completion has not been determined within a predetermined period of time T from the start of the measurement.

12. (Currently Amended) A method for measuring solution concentration, comprising the steps of:

- (1) mixing a test liquid and a reagent liquid to obtain a liquid mixture;
- (2) measuring an optical property of said test liquid and said liquid mixture continuously, or, measuring an optical property of said test liquid at least once and measuring an optical property of said liquid mixture after the mixing a plurality of times discretely;
- (3) obtaining a relation between the measured value of the optical property obtained and the elapsed period of time since the start of the measurement after the mixing;
- (4) determining, on the basis of said relation, whether said test liquid and said reagent liquid have been substantially homogeneously mixed with each other and/or a reaction between said test liquid and said reagent liquid has been substantially completed; and
- (5) determining the concentration of a specific component of said test liquid based on said measured value,

wherein

said step (3) is a step of obtaining $(dS1/dt)/(S1-S0)$ (wherein $S0$ is the measured value of the optical property of said test liquid, $S1$ is the measured value of the optical property of said liquid mixture, and T is the elapsed period of time since the start of the measurement after the mixing), and

said step (4) is a step of determining that said test liquid and said reagent liquid have been substantially homogeneously mixed with each other and/or the reaction between said test liquid and said reagent liquid has been substantially completed, when the $(dS1/dt)/(S1-S0)$ has continuously been in a predetermined range $R3$ for a predetermined period of time $T3$ or longer.

13. (Original) The method for measuring solution concentration in accordance with claim 12, further comprising the step of mixing another reagent liquid with said test liquid, after

determining that the said test liquid and said reagent liquid have been homogeneously mixed and/or the reaction therebetween has been substantially completed.

14. (Original) The method for measuring solution concentration in accordance with claim 13, wherein another reagent liquid is mixed with said test liquid upon the lapse of a predetermined period of time T4 after determining that the said test liquid and said reagent liquid have been homogeneously mixed and/or the reaction therebetween has been substantially completed, and the optical property of said liquid mixture is measured prior to the lapse of the predetermined period of time T4.

15. (Original) The method for measuring solution concentration in accordance with claim 12, wherein a measurement is rendered invalid when homogenization and/or reaction completion has not been determined within a predetermined period of time T from the start of the measurement.